Claim Comparison Chart
Attorney Dkt. No. 100790.344007US2

Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
Claim 1	**Claim 29**		
A building beam structure	A building beam structure	See Mishra Declaration, page A5, oblique view, element 10, and pictures on pages A6-A8. See also Meyer Declaration pages 1-11, exhibits 1-42.	See Figure 1
two sheet metal chords having a flat end wall	two sheet metal chords, each of the chords having a flat end wall	See Mishra Declaration, page A5, oblique view, element 100 (chords) and element 110 (first end wall), see also pictures on pages A6-A8. See also Meyer Declaration page 2 #5 "my original idea was to provide a metal floor joist made from three separate sheets of steel, having two channels (chords) connected by a web. See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Two sheet metal chords (channels) are elements 100 in Figure 1; see also spec. page 6, lines 12-20. Flat end wall is top supporting side (110) in Figure 1; see also spec. page 6, lines 12-15. Additionally, top supporting side has top mounting surface 111.
the chords having two opposed side walls extending from the end wall and having respective flat fastening surfaces to which materials may be connected	two opposed side walls extending from the end wall and having respective flat fastening surfaces to which materials may be connected	See Mishra Declaration, page A5, front view, elements 120A & 120B (opposed side walls, with respective flat fastening surfaces). See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Opposed side walls are left and right supporting walls, elements 120A & 120B in Figure 1 & 2; see also spec page 6, lines 12-15. Additionally, left and right supporting walls have left and right mounting surfaces 121A & 121B (i.e. flat fastening surfaces).

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Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
the chords having two angular support walls, each of the angular support walls extending from one of the side walls, and the angular support walls converging inwardly from the side walls	two angular support walls, each of the angular support walls extending from one of the side walls, and the angular support walls converging inwardly from the side walls	See Mishra Declaration, page A5, front view, elements 130A & 130B (angular support walls). See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Angular support walls are left and right transition sides, elements 130A & 130B in Figure 1 & 2; see also spec. page 6, line 15. Additionally, left and right transition sides have left and right transition surfaces 131A & 131B.
a sheet metal central web section disposed between the two chords	a sheet metal central web section disposed between the two chords	See Mishra Declaration, page A5, oblique view, element 200 (sheet metal central web). See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Sheet metal central web section is web 200 in Figure 1; see also spec. page 6, line 15.
a planar main web wall extending straight between one of the angular support walls on each of the chords	a substantially flat main web wall extending straight between one of the angular support walls on each of the chords	See Mishra Declaration, page A5, front view, element 210 See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Substantially flat main web wall is body 210 in Figure 1; see also spec. page 6, lines 15-18.
a first web wall section extending from another of the angular support walls on one of the chords	a first web wall section extending from another of the angular support walls on one of the chords	See Mishra Declaration., page A5, front view, element 240 (chord lips). See also, Meyer Dec., page 4 #23, exhibit 16 drawings and Meyer Dec., page 5, #23, exhibit 16, page 1.	First web wall section is chord lips 240 in Figure 1; see also spec. page 6, lines 15-18
a second web wall section extending from another of the angular support walls on another of the chords	a second web wall section extending from another of the angular support walls on another of the chords	See Mishra Declaration, page A5, front view, element 240 (chord lips). See also, Meyer Dec., page 4 #23, exhibit 16 drawings page 2 and Meyer Dec., page 5, #24, exhibit 17.	second web wall section is chord lips 240 in Figure 1; see also spec. page 6, lines 15-18
Claim 2	**Claim 30**		
fastening devices connecting the first and second web wall sections with the main web wall	fastening devices connecting the first and second web wall sections with the main web wall	See Mishra Declaration, page A5, side view, elements 230 (fastening devices connecting 1st and 2nd web wall sections).	Fastening devices are fasteners 230, in Figure 1; see also spec. page 6, lines 15-18; and spec. page 8, lines 5-7. See also spec. page 12,

Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
		See also, Meyer Dec., page 4 #23, exhibit 16 drawings page 1-2; and Meyer Dec., page 5, #24, exhibit 17, page 1.	lines 9-10.
Claim 3	**Claim 31**		
the two sheet metal chords and the sheet metal central web section are made from a single piece of sheet metal	the two sheet metal chords and the sheet metal central web section are made from a single piece of sheet metal	See Meyer Declaration, page 4 #23, exhibit 16 drawings, see also Meyer Dec., pages 7-9 #38-51., exhibits 28-39. See Mishra Declaration, page A5, front view notice how the channels and web are one continuous piece. See also Mishra Dec., pictures on pages A6-A8, notice how it appears that the structures are a continuous piece of metal.	See spec page 12, lines 6-12, (i.e. roll forming a sheet of metal into the sheet shown in Figures 1 and 2.
Claim 4	**Claim 32**		
the two sheet metal chords and sheet metal central web section are made from a single piece of sheet metal having a thickness in the range of from approximately 16-gauge to approximately 24-gauge	the two sheet metal chords and sheet metal central web section are made from a single piece of sheet metal having a thickness in the range of from approximately **18-gauge** to approximately **20-gauge**	See Meyer Declaration, page 2 #10, calculations of strengths, exhibit 4 (showing 18, 20guage). See also Meyer Dec., page 4 #20, exhibit 13 (showing 14, 16guage). See also Meyer Dec., page 4 #21, exhibit 14 (showing 20, 22, 25 gauge) and Meyer Dec., page 4 #22, exhibit 15 (showing 14, 16, 18 gauge).	See spec page 7, lines 21-23 "alternate embodiments may utilize various gauges of steel, not necessarily limited to 18 to 20 gauge. See also spec page 8, line 3. (Web formed from same sheet material as chords). **However, no explicit support was found in the specification reciting a metal gauge range of 16 to 24.**
Claim 5	**Claim 33**		
the two sheet metal chords and sheet metal central web section are made from a single piece of approximately 20 gage sheet metal	the two sheet metal chords and sheet metal central web section are made from a single piece of approximately 20 gage sheet metal	See Meyer Declaration, page 2 #10, calculations of strengths, exhibit 4 (showing 18, 20guage). See also Meyer Dec., page 8 #43, exhibit 32 (showing use of 20 gauge, for single piece forming chords and web section).	See spec page 7, lines 21-23 "alternate embodiments may utilize various gauges of steel, not necessarily limited to 18 to 20 gauge. See also spec page 8, line 3. (Web formed from same sheet material as chords).

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Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
Claim 6	**Claim 34**		
the end wall of one chord is substantially parallel to the end wall of the other chord.	the end wall of one chord is substantially parallel to the end wall of the other chord.	See Mishra Declaration, page A5, front view, elements 110 (end wall) of first chord is parallel to element 110 of second chord (i.e. bottom chord) and see also pictures on pages A6. See Meyer Dec, page 4 #23, exhibit 16, pg2 of drawings. Notice how both the end walls of the chords are parallel.	End wall is top supporting side (110) in Figure 2 (notice how both 110 elements are substantially parallel in Figure 2).
Claim 7	**Claim 35**		
the side walls are substantially perpendicular to each end wall	the side walls are substantially perpendicular to each end wall.	See Mishra Declaration, page A5, front view, elements 120A & 120B are (i.e. side walls) are perpendicular to element 110 (end wall). See Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings. Notice how both the side walls are perpendicular to end walls of the chords.	End wall is top supporting side (110) in Figure 2 (notice how both end wall 110 elements are perpendicular to each side wall (i.e. left and right supporting sides 120A & 120B).
Claim 8	**Claim 36**		
the central web section is substantially perpendicular to each end wall and substantially parallel to the side walls	the central web section is substantially perpendicular to each end wall and substantially parallel to the side walls	See Mishra Declaration, page A5, front view, elements 210 (central web) is perpendicular to end walls 110 and parallel to side walls 120A & 120B. See Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings. Notice how both the side walls are parallel to central chord and central chord is perpendicular to end walls of the chords.	Central web section is body 210 in figure 2. Notice how web wall 210 is perpendicular to end walls 110 and parallel to side walls 120A & 120B. See also spec page 7, lines 5-7, referring to left mounting surface 121A (of left side wall 120A) and right side mounting surface 121B (of right side wall 120B) being substantially parallel to web body 210; top mounting surface 111 of

Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
			end wall 110 being substantially perpendicular to web body 210.
Claim 9	**Claim 37**		
each end wall is disposed in a generally horizontal direction and the central web section is disposed in a generally vertical direction	each end wall is disposed in a generally horizontal direction and the central web section is disposed in a generally vertical direction	See Mishra Declaration, page A5, front view, elements 210 (central web) is in an vertical direction and end walls 110 are in a horizontal direction. See Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings. Notice how the end walls are horizontal and central web section is vertical.	See figure 1 & 2. Central web section is body 210 in figure 2. Notice how web wall 210 is vertical and end walls 110 are horizontal.
Claim 10	**Claim 38**		
each end wall on each of the chords has two opposed longitudinal lateral edges.	each end wall on each of the chords has two opposed longitudinal lateral edges	See Mishra Declaration, page A5, oblique view, elements 300 (opposing longitudinal edges). See also Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings.	See spec page 7, lines 8-16. See also figure 1. Here the left and right mounting surface 121A and 121B and left and right transition surface 131A & 131B comprise a top and a bottom edge. Such that the top edges (i.e. opposed longitudinal lateral edges) couple to top mounting surface 111.
Claim 11	**Claim 39**		
each of the two side walls on each of the chords has first and second longitudinal edges with the first longitudinal edge of each of the side walls being connected to one of the longitudinal lateral edges of one of the end walls	each of the two side walls on each of the chords has first and second longitudinal edges with the first longitudinal edge of each of the side walls being connected to one of the longitudinal lateral edges of one of the end walls	See Mishra Declaration, page A5, oblique view, elements 300 (i.e. first longitudinal edge), elements 301 (i.e. second longitudinal edge). See also Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings.	See spec page 7, lines 8-16. See also figure 1 & 2. Here the left and right mounting surface 121A & 121B and left and right transition surface 131A & 131B comprise a top and a bottom edge such that the top edge of the left and right mounting surface couple to the top mounting surface 111.
Claim 12	**Claim 40**		
each of the two angular support walls on each of the chords has first and second longitudinal edges with the first longitudinal edge of each of	each of the two angular support walls on each of the chords has first and second longitudinal edges with the first longitudinal edge of each of the	See Mishra Declaration, page A5, oblique view, elements 301 (i.e. first longitudinal edge of angular support wall & second edge of side wall) and	See spec page 7, lines 11-15. See also figure 1 & 2. Here the left and right transition surface 131A & 131B (i.e. angular support walls)

Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
the angular support walls being connected to the second longitudinal edge of one of the side walls	angular support walls being connected to the second longitudinal edge of one of the side walls	elements 302 (i.e. second longitudinal edge of angular support wall) See also Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings.	have a top and a bottom edge such that the top edge of left and right transition surface (i.e. angular support walls) couples the bottom edge (i.e. second longitudinal edge) of the side walls (i.e. mounting surfaces 121A & 121B).
Claim 13	**Claim 41**		
the main web wall of the central web section further comprises two longitudinal edges with one of the longitudinal edges being connected to the second longitudinal edge of one of the angular support walls on one of the chords and the other of the longitudinal edges being connected to the second longitudinal edge of one of the angular support walls on the other of the chords	the main web wall of the central web section further comprises two longitudinal edges with one of the longitudinal edges being connected to the second longitudinal edge of one of the angular support walls on one of the chords and the other of the longitudinal edges being connected to the second longitudinal edge of one of the angular support walls on the other of the chords	See Mishra Declaration, page A5, oblique view. See also Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings.	See spec page 7, lines 15-16. See also figure 1 & 2.
Claim 14	**Claim 42**		
the first web wall section of the central web section further comprises a longitudinal edge connected to the second longitudinal edge of the other of the angular support walls on one of the chords	the first web wall section of the central web section further comprises a longitudinal edge connected to the second longitudinal edge of the other of the angular support walls on one of the chords	See Mishra Declaration, page A5, oblique view. See also Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings.	See spec page 7, lines 15-16. See also figure 1 & 2.
Claim 15	**Claim 43**		
the second web wall section of the central web section further comprises a longitudinal edge connected to the second longitudinal edge of the other of the angular support walls on the other of the chords	the second web wall section of the central web section further comprises a longitudinal edge connected to the second longitudinal edge of the other of the angular support walls on the other of the chords	See Mishra Declaration, page A5, oblique view. See also Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings.	See spec page 7, lines 15-16. See also figure 1 & 2.
Claim 16	**Claim 44**		
a plurality of holes spaced longitudinally along the central web	a plurality of holes spaced longitudinally along the central web	See Mishra Declaration, page A5, side view, element 222; see also Mishra	See spec. page 8, lines 3-6; it is preferred that web 200 be open in

Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
section and sized to receive apparatus for utilities	section and sized to receive apparatus for utilities	Dec., pictures on pages A6 & A8. See Meyer Dec., page 4 #23, and exhibit 16, pictures on pages 1-2.	the sense that portions of the web body 210 are removed, to create a pattern shown in figures 1 & 2.
Claim 17	**Claim 45**		
one of the side walls of one chord is coplanar with one of the side walls of the other chord, and the other of the side walls of the one chord is coplanar with the other of the side walls of the other chord	one of the side walls of one chord is cosubstantially flat with one of the side walls of the other chord, and the other of the side walls of the one chord is cosubstantially flat with the other of the side walls of the other chord	See Mishra Declaration, page A5, front view, side wall 120A of first chord is co-planar (i.e. co-substantially flat) with the side wall 120A of a second chord and side wall 120B of first chord is co-planar (i.e. co-substantially flat) with the side wall 120B of a second chord. See also Meyer Dec., page 4-5 #23-24, and exhibit 16-17.	See Figure1 and 2, and spec. page 6, lines 19-27. Figure 1 and 2 show that side walls 120A & 120B (i.e. left & right supporting sides) of one chord are co-planar (i.e. co-substantially flat) with the side walls 120A & 120B of the other chord.
Claim 18	**Claim 46**		
A building beam structure	A building beam structure	See Mishra Declaration, page A5, oblique view, element 10, and pictures on pages A6-A8. See also Meyer Declaration pages 1-11, exhibits 1-42.	See Figure 1
An upper and lower sheet metal chords	An upper and lower sheet metal chords	See Mishra Declaration, page A5, oblique view, elements 100 (chords), see also pictures on pages A6. See also Meyer Declaration page 2 #5 "my original idea was to provide a metal floor joist, having two channels (chords) connected by a web. See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Two sheet metal chords (channels) are elements 100 in Figure 1; see also spec. page 6, lines 12-20.
each of the chords having a flat end wall	each of the chords having a flat end wall	See Mishra Declaration, page A5, oblique view, element 110 (flat end wall), see also pictures on pages A6,	Flat end wall is top supporting side (110) in Figure 1; see also spec. page 6, lines 12-15. Additionally,

Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
		A8. See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	top supporting side has top mounting surface 111.
each chord having two opposed side walls extending from the end wall and having respective flat fastening surfaces to which materials may be connected	each of the chords having two opposed side walls extending from the end wall and having respective flat fastening surfaces to which materials may be connected	See Mishra Declaration, page A5, front view, elements 120A & 120B (opposed side walls, with respective flat fastening surfaces). See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Opposed side walls are left and right supporting walls, elements 120A & 120B in Figure 1 & 2; see also spec page 6, lines 12-15. Additionally, left and right supporting walls have left and right mounting surfaces 121A & 121B (i.e. flat fastening surfaces).
each chord having two angular support walls, each of the angular support walls extending from one of the side walls, and the angular support walls converging inwardly from the side walls	each of the chords having two angular support walls, each of the angular support walls extending from one of the side walls, and the angular support walls converging inwardly from the side walls	See Mishra Declaration, page A5, front view, elements 130A & 130B (angular support walls). See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Angular support walls are left and right transition sides, elements 130A & 130B in Figure 1 & 2; see also spec. page 6, line 15. Additionally, left and right transition sides have left and right transition surfaces 131A & 131B.
sheet metal planar web walls extending from the angular support walls intermediate the upper and lower chords	sheet metal substantially flat web walls extending from the angular support walls intermediate the upper and lower chords	See Mishra Declaration, page A5, oblique view, element 200 (sheet metal central web). See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Sheet metal central web section is web 200 in Figure 1; see also spec. page 6, line 15.
fastening devices connecting the web walls together, thereby providing a sheet metal beam structure having upper and lower chords and an intermediate web	fastening devices connecting the web walls together, thereby providing a sheet metal beam structure having upper and lower chords and an intermediate web	See Mishra Declaration, page A5, side view, elements 230 (fastening devices connecting 1st and 2nd web wall sections). See also, Meyer Dec., page 4 #23, exhibit 16 drawings page 1-2; and Meyer Dec., page 5, #24, exhibit 17, page 1.	Fastening devices are fasteners 230, in Figure 1; see also spec. page 6, lines 15-18; and spec. page 8, lines 5-7. See also spec. page 12, lines 9-10.
Claim 19	**Claim 47**		

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Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
a main web wall extending between one of the angular support walls on each of the upper and lower chords	a main web wall extending between one of the angular support walls on each of the upper and lower chords	See Mishra Declaration, page A5, front view, element 210 See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Substantially flat main web wall is body 210 in Figure 1; see also spec. page 6, lines 15-18.
a first web wall section extending from another of the angular support walls on the upper chord	a first web wall section extending from another of the angular support walls on the upper chord	See Mishra Declaration., page A5, front view, element 240 (chord lips). See also, Meyer Dec., page 4 #23, exhibit 16 drawings and Meyer Dec., page 5, #23, exhibit 16, page 1.	First web wall section is chord lips 240 in Figure 1; see also spec. page 6, lines 15-18
a second web wall section extending from another of the angular support walls on the lower chord, the fastening devices connecting the first and second web wall sections with the main web wall	a second web wall section extending from another of the angular support walls on the lower chord, the fastening devices connecting the first and second web wall sections with the main web wall	**Second web wall**: See Mishra Declaration, page A5, front view, element 240 (chord lips). See also, Meyer Dec., page 4 #23, exhibit 16 drawings page 2 and Meyer Dec., page 5, #24, exhibit 17. **Fastening devices**: See Mishra Declaration, page A5, side view, elements 230 (fastening devices connecting 1st and 2nd web wall sections). See also, Meyer Dec., page 4 #23, exhibit 16 drawings page 1-2; and Meyer Dec., page 5, #24, exhibit 17, page 1.	**second web wall** section is chord lips 240 in Figure 1; see also spec. page 6, lines 15-18 **Fastening devices** are fasteners 230, in Figure 1; see also spec. page 6, lines 15-18; and spec. page 8, lines 5-7. See also spec. page 12, lines 9-10.
Claim 20	**Claim 48**		
	a substantially flat main web wall extending straight between one of the angular support walls on each of the chords,	See Mishra Declaration, page A5, front view, element 210 See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Substantially flat main web wall is body 210 in Figure 1; see also spec. page 6, lines 15-18.

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Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
a first pair of web wall sections, each of the first pair of web wall sections extending from one of the angular support walls on the upper chord	a first web wall section extending from one of the angular support walls on one of the chords	See Mishra Declaration., page A5, front view, element 240 (chord lips) and element 210 (substantially flat main web wall). See also, Meyer Dec., page 4 #23, exhibit 16 drawings and Meyer Dec., page 5, #23, exhibit 16, page 1. **No explicit support was found in the evidence for a first pair of web wall sections, extending from one of the angular support walls on one of the chords. But, this is an obvious variation.**	First web wall section is chord lips 240 in Figure 1; see also spec. page 6, lines 15-18. **No explicit support was found in specification for a first pair of web wall sections, extending from one of the angular support walls on one of the chords. But, this is an obvious variation**
a second pair of web wall sections each of the second pair of web wall sections extending from one of the angular support walls on the lower chord	a second web wall section extending from another of the angular support walls on another of the chords	See Mishra Declaration, page A5, front view, element 240 (chord lips). See also, Meyer Dec., page 4 #23, exhibit 16 drawings page 2 and Meyer Dec., page 5, #24, exhibit 17. **No explicit support was found in the evidence for a second pair of web wall sections, extending from another of the angular support walls on another of the chords. But, this is an obvious variation.**	second web wall section is chord lips 240 in Figure 1; see also spec. page 6, lines 15-18 **No explicit support was found in the specification for a second pair of web wall sections, extending from another of the angular support walls on another of the chords. But, this is an obvious variation.**
Claim 21	**Claim 49**		
A building joist structure	A building joist structure	See Mishra Declaration, page A5, oblique view, element 10, and pictures on pages A6-A8. See also Meyer Declaration pages 1-	See Figure 1

Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
		11, exhibits 1-42.	
a first and second sheet metal chords	a first and second sheet metal chords	See Mishra Declaration, page A5, oblique view, element 100 (chords); see also pictures on pages A6-A8. See also Meyer Declaration page 2 #5 "my original idea was to provide a metal floor joist made from three separate sheets of steel, having two channels (chords) connected by a web. See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Two sheet metal chords (channels) are elements 100 in Figure 1; see also spec. page 6, lines 12-20.
each chord having a flat end wall with opposed longitudinal lateral edges	each chord having a flat end wall with opposed longitudinal lateral edges	**Flat end wall**: See Mishra Declaration, page A5, oblique view, element 110 (flat end wall), see also pictures on pages A6-A8. **Opposed Longitudinal lateral edges**: See Mishra Declaration, page A5, oblique view (opposing longitudinal edges). See also Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings.	**Flat end wall**: Flat end wall is top supporting side (110) in Figure 1; see also spec. page 6, lines 12-15. Additionally, top supporting side has top mounting surface 111. **Opposed longitudinal lateral edges**: See spec page 7, lines 8-16. See also figure 1. Here the left and right mounting surface 121A and 121B and left and right transition surface 131A & 131B comprise a top and a bottom edge. Such that the top edges (i.e. opposed longitudinal lateral edges) couple to top mounting surface 111.
each chord having two generally parallel side walls	each chord having two generally parallel side walls	See Mishra Declaration, page A5, front view, elements 120A & 120B (i.e. side walls) are parallel. See Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings. Notice how both the	See Figure 2 (notice how both side walls (i.e. left and right supporting sides 120A & 120B) are parallel.

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		side walls are parallel.	
each side wall having a longitudinal first edge extending from one of the longitudinal lateral edges of the end wall	each side wall having a longitudinal first edge extending from one of the longitudinal lateral edges of the end wall	See Mishra Declaration, page A5, oblique view, elements 300 (i.e. first longitudinal edge of side wall & longitudinal lateral edge of end wall). See also Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings.	See spec page 7, lines 8-16. See also figure 1 & 2. Here the left and right mounting surface 121A & 121B and left and right transition surface 131A & 131B comprise a top and a bottom edge such that the top edge of the left and right mounting surface couple to the top mounting surface 111.
each side wall having a longitudinal second edge	each side wall having a longitudinal second edge	See Mishra Declaration; page A5, oblique view, elements 301 (i.e. second longitudinal edge). See also Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings.	See spec page 7, lines 8-16. See also figure 1 & 2. Here the left and right mounting surface 121A & 121B and left and right transition surface 131A & 131B comprise a top and a bottom edge.
each side wall having a flat fastening surface between the first and second longitudinal edges of the side wall to which materials may be connected	each side wall having a flat fastening surface between the first and second longitudinal edges of the side wall to which materials may be connected	See Mishra Declaration, page A5, front view, elements 120A & 120B (opposed side walls, with respective flat fastening surfaces); see also A5, oblique view, how the flat fastening surfaces are between the first and second longitudinal edges. See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Opposed side walls are left and right supporting walls, elements 120A & 120B in Figure 1 & 2; see also spec page 6, lines 12-15. See also spec page 7, lines 8-16, left and right supporting walls have left and right mounting surfaces 121A & 121B (i.e. flat fastening surfaces).
each chord having two angular support walls converging inwardly from the side walls	each chord having two angular support walls converging inwardly from the side walls	See Mishra Declaration, page A5, front view, elements 130A & 130B (angular support walls). See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Angular support walls are left and right transition sides, elements 130A & 130B in Figure 1 & 2; see also spec. page 6, line 15. Additionally, left and right transition sides have left and right

Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
			transition surfaces 131A & 131B.
each angular support wall having a longitudinal first edge extending from the longitudinal second edge of the side wall	each angular support wall having a longitudinal first edge extending from the longitudinal second edge of the side wall	See Mishra Declaration, page A5, oblique view, elements 301 (i.e. first longitudinal edge of angular support wall & second longitudinal edge of side wall). See also Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings.	See spec page 7, lines 11-15. See also figure 1 & 2. Here the left and right transition surface 131A & 131B (i.e. angular support walls) have a top and a bottom edge such that the top edge of transition surface couples the bottom edge (i.e. second longitudinal edge) of the side walls.
each angular support wall having a longitudinal second edge	each angular support wall having a longitudinal second edge	See Mishra Declaration, page A5, oblique view, elements 302 (i.e. second longitudinal edge of angular support wall) See also Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings.	See spec page 7, lines 11-15. See also figure 1 & 2. Here the left and right transition surface 131A & 131B (i.e. angular support walls) have a top and a bottom edge.
a sheet metal central web section connected between the two chords	a sheet metal central web section connected between the two chords	See Mishra Declaration, page A5, oblique view, element 200 (sheet metal central web). See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Sheet metal central web section is web 200 in Figure 1; see also spec. page 6, line 15.
a planar main web wall	a substantially flat web wall	See Mishra Declaration, page A5, front view, element 210 See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Substantially flat main web wall is body 210 in Figure 1; see also spec. page 6, lines 15-18.
the planar main web wall having a longitudinal first edge extending from the longitudinal second edge of the one of the support walls on	the substantially flat main web wall having a longitudinal first edge extending from the longitudinal second edge of the one of the support	See Mishra Declaration, page A5, oblique view, element 302 (i.e. 1st edge of planar main web wall & 2nd edge of one of the support walls)	See spec page 7, lines 15-16. See also figure 1 & 2.

Claim Comparison Chart
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Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
the first chord	walls on the first chord See also Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings.		
the planar main web wall having a longitudinal second edge extending from the longitudinal second edge of one of the support walls on the second chord	the substantially flat main web wall having a longitudinal second edge extending from the longitudinal second edge of one of the support walls on the second chord	See Mishra Declaration, page A5, front view, element 303 (i.e. 2nd edge of planar main web wall & 2nd edge of one of the support walls) See also Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings.	See spec page 7, lines 15-16. See also figure 1 & 2.
the sheet metal web section including a first web wall section having a longitudinal first edge extending from the longitudinal second edge of another of the support walls on the first chord	the sheet metal web section including a first web wall section having a longitudinal first edge extending from the longitudinal second edge of another of the support walls on the first chord	See Mishra Declaration, page A5, oblique view. See also Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings.	See spec page 7, lines 15-16. See also figure 1 & 2.
the sheet metal web section including a second web wall section having a longitudinal first edge extending from the longitudinal second edge of another of the support walls on the second chord, the first and second web wall sections extending adjacent the main web wall	the sheet metal web section including a second web wall section having a longitudinal first edge extending from the longitudinal second edge of another of the support walls on the second chord, the first and second web wall sections extending adjacent the main web wall	See Mishra Declaration, page A5, oblique view. See also Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings.	See spec page 7, lines 15-16. See also figure 1 & 2.
fastening devices connecting the first and second web wall sections with the main web wall	fastening devices connecting the first and second web wall sections with the main web wall	See Mishra Declaration, page A5, side view, elements 230 (fastening devices connecting 1st and 2nd web wall sections). See also, Meyer Dec., page 4 #23, exhibit 16 drawings page 1-2; and Meyer Dec., page 5, #24, exhibit 17, page 1.	Fastening devices are fasteners 230, in Figure 1; see also spec. page 6, lines 15-18; and spec. page 8, lines 5-7. See also spec. page 12, lines 9-10.

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Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
Claim 22	**Claim 50**		
A building joist structure	A building joist structure	See Mishra Declaration, page A5, oblique view, element 10, and pictures on pages A6-A8. See also Meyer Declaration pages 1-11, exhibits 1-42.	See Figure 1
a single sheet metal piece having upper and lower opposed chords connected by a generally vertical web section	a single sheet metal piece having upper and lower opposed chords connected by a generally vertical web section	See Meyer Declaration, page 4 #23, exhibit 16 drawings, see also Meyer Dec., pages 7-9 #38-51., exhibits 28-39. See Mishra Declaration, page A5, oblique view & side view, notice how the web is vertical and the chords 100 and the web 200 are one continuous piece. See also Mishra Dec., pictures on pages A6-A8, notice how it appears that the structures are a continuous piece of metal. Further	See spec page 12, lines 6-12, roll forming a sheet of metal into the sheet shown in Figures 1 and 2, (i.e. continuous sheet contains two chords and vertical web section).
each of the chords having five walls	each of the chords having five walls	See Mishra Dec., page A5, front view. See also Meyer Dec., page 4 #23, exhibit 16, page 2 pictures.	See figure 1 & 2; see also spec page 6, lines 16-17.
a generally horizontal flat end wall	a generally horizontal flat end wall	See Mishra Declaration, page A5, front view, elements 110 end walls are in a horizontal direction. See Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings. Notice how the end walls are horizontal.	See figure 1 & 2 end walls 110 (i.e. top supporting sides) are horizontal.
two generally vertical side walls connected along upper longitudinal edges to the end wall, the side walls having respective flat fastening surfaces to which materials may be connected	two generally vertical side walls connected along upper longitudinal edges to the end wall, the side walls having respective flat fastening surfaces to which materials may be connected	See Mishra Dec., page A5, front view, elements 120A & 120B (vertical side walls) connected at the upper longitudinal edge 300 to end wall 110, vertical side walls have flat fastening surfaces. See also Meyer Dec., page 4 #23, exhibit 16, page 2 picture.	See figure 1 & 2; see also spec page 7, lines 3-16.

Claim Comparison Chart
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Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
two angular support walls connected along upper longitudinal edges to lower longitudinal edges of the vertical side walls, the angular support walls converging inward from the vertical side walls	two angular support walls connected along upper longitudinal edges to lower longitudinal edges of the vertical side walls, the angular support walls converging inward from the vertical side walls	See Mishra Declaration, page A5, oblique view, elements 301 (i.e. first longitudinal edge of angular support wall & second longitudinal edge of vertical side wall). See also Meyer Dec, page 4 #23, exhibit 16 pg 2 of drawings.	See spec page 7, lines 11-15. See also figure 1 & 2. Here the left and right transition surface 131A & 131B (i.e. angular support walls) have a top and a bottom edge such that the top edge of transition surface couples the bottom edge of the side walls.
A web section	A web section	See Mishra Declaration, page A5, oblique view, element 200 (sheet metal central web). See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Sheet metal central web section is web 200 in Figure 1; see also spec. page 6, line 15.
a first planar web wall connected to first angular support walls on each of the top and bottom chords	a first substantially flat web wall connected to first angular support walls on each of the top and bottom chords	See Mishra Declaration, page A5, front view, element 210 (i.e. first planar web wall) See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Substantially flat main web wall is body 210 in Figure 1; see also spec. page 6, lines 15-18.
a second web wall connected to a second angular support wall on the upper chord	a second web wall connected to a second angular support wall on the upper chord	See Mishra Declaration., page A5, front view, element 240 (chord lips). See also, Meyer Dec., page 4 #23, exhibit 16 drawings and Meyer Dec., page 5, #23, exhibit 16, page 1.	First web wall section is chord lips 240 in Figure 1; see also spec. page 6, lines 15-18
a third web wall connected to a second angular support wall on the lower chord	a third web wall connected to a second angular support wall on the lower chord	See Mishra Declaration, page A5, front view, element 240 (chord lips). See also, Meyer Dec., page 4 #23, exhibit 16 drawings page 2 and Meyer Dec., page 5, #24, exhibit 17.	second web wall section is chord lips 240 in Figure 1; see also spec. page 6, lines 15-18
Claim 23	**Claim 51**		
fastening devices connecting the	fastening devices connecting the	See Mishra Declaration, page A5, side	Fastening devices are fasteners

Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
second and third web walls with the first web wall	second and third web walls with the first web wall	view, elements 230 (fastening devices connecting 2nd and 3rd web wall sections to 1st web wall). See also, Meyer Dec., page 4 #23, exhibit 16 drawings page 1-2; and Meyer Dec., page 5, #24, exhibit 17, page 1.	230, in Figure 1; see also spec. page 6, lines 15-18; and spec. page 8, lines 5-7. See also spec. page 12, lines 9-10.
Claim 24	**Claim 52**		
a plurality of holes spaced longitudinally along the central web section and sized to receive apparatus for utilities	a plurality of holes spaced longitudinally along the central web section and sized to receive apparatus for utilities	See Mishra Declaration, page A5, side view, element 222; see also Mishra Dec., pictures on pages A6 & A8. See Meyer Dec., page 4 #23, and exhibit 16, pictures on pages 1-2.	See spec. page 8, lines 3-6; it is preferred that web 200 be open in the sense that portions of the web body 210 are removed, to create a pattern shown in figures 1 & 2.
Claim 25	**Claim 53**		
one of the side walls of one chord is coplanar with one of the side walls of the other chord, and the other of the side walls of the one chord is coplanar with the other of the side walls of the other chord	one of the side walls of one chord is cosubstantially flat with one of the side walls of the other chord, and the other of the side walls of the one chord is cosubstantially flat with the other of the side walls of the other chord	See Mishra Declaration, page A5, front view, side wall 120A of first chord is co-planar (i.e. co-substantially flat) with the side wall 120A of a second chord and side wall 120B of first chord is co-planar (i.e. co-substantially flat) with the side wall 120B of a second chord. See also Meyer Dec., page 4-5 #23-24, and exhibit 16-17.	See Figure1 and 2, and spec. page 6, lines 19-27. Figure 1 and 2 show that side walls 120A & 120B (i.e. left & right supporting sides) of one chord are co-planar (i.e. co-substantially flat) with the side walls 120A & 120B of the other chord.
Claim 26	**Claim 54**		
A building beam structure	A building beam structure	See Mishra Declaration, page A5, oblique view, element 10, and pictures on pages A6-A8. See also Meyer Declaration pages 1-11, exhibits 1-42.	See Figure 1

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Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
two sheet metal chords	two sheet metal chords	See Mishra Declaration, page A5, oblique view, element 100 (chords), see also pictures on pages A6-A8. See also Meyer Declaration page 2 #5 "my original idea was to provide a metal floor joist, having two channels (chords). See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Two sheet metal chords (channels) are elements 100 in Figure 1; see also spec. page 6, lines 12-20.
each of the chords having a flat end wall	each of the chords having a flat end wall	See Mishra Declaration, page A5, oblique view, element 110 (flat end wall), see also pictures on pages A6-A8.	Flat end wall is top supporting side (110) in Figure 1; see also spec. page 6, lines 12-15. Additionally, top supporting side has top mounting surface 111.
each of the chords having two opposed side walls extending from the end wall and having respective flat fastening surfaces to which materials may be connected	each of the chords having two opposed side walls extending from the end wall and having respective flat fastening surfaces to which materials may be connected	See Mishra Declaration, page A5, front view, elements 120A & 120B (opposed side walls, with respective flat fastening surfaces). See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Opposed side walls are left and right supporting walls, elements 120A & 120B in Figure 1 & 2; see also spec page 6, lines 12-15. Additionally, left and right supporting walls have left and right mounting surfaces 121A & 121B (i.e. flat fastening surfaces).
each of the chords having one angular support wall, the angular support wall extending from one of the side walls, and the angular support wall converging inwardly from the side walls	each of the chords having two angular support walls, each of the angular support walls extending from one of the side walls, and the angular support walls converging inwardly from the side walls	See Mishra Declaration, page A5, front view, elements 130A & 130B (angular support walls). See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2. **The applicant agrees that there is no support in the evidence for one angular support wall extending from one of the side walls. However, this is an obvious variation.**	Angular support walls are left and right transition sides, elements 130A & 130B in Figure 1 & 2; see also spec. page 6, line 15. Additionally, left and right transition sides have left and right transition surfaces 131A & 131B. **The applicant agrees that there is no support in the specification for one angular support wall**

Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
			extending from one of the side walls. However, this is an obvious variation.
each of the chords having a sheet metal central web section disposed between the two chords	each of the chords having a sheet metal central web section disposed between the two chords	See Mishra Declaration, page A5, oblique view, element 200 (sheet metal central web). See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Sheet metal central web section is web 200 in Figure 1; see also spec. page 6, line 15.
a main planar web wall extending straight between another of the side walls on each of the chords	a substantially flat main web wall extending straight between one of the angular support walls on each of the chords	See Mishra Declaration, page A5, front view, element 210 See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2. **The applicant agrees that there is no support in the evidence for a main substantially flat web wall extending straight between another of the side walls on each of the chords. However, this is an obvious variation.**	Substantially flat main web wall is body 210 in Figure 1; see also spec. page 6, lines 15-18. **The applicant agrees that there is no support in the specification for a main substantially flat web wall extending straight between another of the side walls on each of the chords. However, this is an obvious variation.**
a first web wall section extending from one of the angular support walls on one of the chords	a first web wall section extending from one of the angular support walls on one of the chords	See Mishra Declaration., page A5, front view, element 240 (chord lips) extending from upper angular support, element 130A. See also, Meyer Dec., page 4 #23, exhibit 16 drawings and Meyer Dec., page 5, #23, exhibit 16, page 1.	First web wall section is chord lips 240 in Figure 1; see also spec. page 6, lines 15-18
a second web wall section extending from one of the angular support	a second web wall section extending from one of the angular support walls	See Mishra Declaration, page A5, front view, element 240 (chord lips)	second web wall section is chord lips 240 in Figure 1; see also spec.

Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
walls on another of the chords	on another of the chords	extending from lower angular support 240. See also, Meyer Dec., page 4 #23, exhibit 16 drawings page 2 and Meyer Dec., page 5, #24, exhibit 17.	page 6, lines 15-18
Claim 27	**Claim 55**		
fastening devices connecting the first and second web wall sections with the main web wall	fastening devices connecting the first and second web wall sections with the main web wall	See Mishra Declaration, page A5, side view, elements 230 (fastening devices connecting 1st and 2nd web wall sections). See also, Meyer Dec., page 4 #23, exhibit 16 drawings page 1-2; and Meyer Dec., page 5, #24, exhibit 17, page 1.	Fastening devices are fasteners 230, in Figure 1; see also spec. page 6, lines 15-18; and spec. page 8, lines 5-7. See also spec. page 12, lines 9-10.
Claim 28	**Claim 56**		
A building beam structure	A building beam structure	See Mishra Declaration, page A5, oblique view, element 10, and pictures on pages A6-A8. See also Meyer Declaration pages 1-11, exhibits 1-42.	See Figure 1
two sheet metal beam components	two sheet metal beam components	See Mishra Declaration, page A5, oblique view, element 100 (chords) (i.e. two sheet metal beam components), see also pictures on pages A6-A8. See also Meyer Declaration page 2 #5 "my original idea was to provide a metal floor joist having two channels (chords). See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Two sheet metal beams (chords) are elements 100 in Figure 1; see also spec. page 6, lines 12-20.
each the beam components having a flat end wall	each the beam components having a flat end wall	See Mishra Declaration, page A5, oblique view, element 110 (flat end wall), see also pictures on pages A6-	Flat end wall is top supporting side (110) in Figure 1; see also spec. page 6, lines 12-15. Additionally,

Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
		A8.	top supporting side has top mounting surface 111.
each the beam components having two opposed side walls extending from the end wall and having respective flat fastening surfaces to which materials may be connected	each the beam components having two opposed side walls extending from the end wall and having respective flat fastening surfaces to which materials may be connected	See Mishra Declaration, page A5, front view, elements 120A & 120B (opposed side walls, with respective flat fastening surfaces), that extend from end wall. See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Opposed side walls are left and right supporting walls, elements 120A & 120B in Figure 1 & 2; see also spec page 6, lines 12-15. Additionally, left and right supporting walls have left and right mounting surfaces 121A & 121B (i.e. flat fastening surfaces).
each the beam components having two angular support walls, each of the angular support walls extending from one of the side walls, and the angular support walls converging inwardly from the side walls	each the beam components having two angular support walls, each of the angular support walls extending from one of the side walls, and the angular support walls converging inwardly from the side walls	See Mishra Declaration, page A5, front view, elements 130A & 130B (angular support walls). See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	Angular support walls are left and right transition sides, elements 130A & 130B in Figure 1 & 2; see also spec. page 6, line 15. Additionally, left and right transition sides have left and right transition surfaces 131A & 131B.
each the beam components having two sheet metal web walls, each of the web walls extending from one of the angular support walls	each of the beam components a first and a second sheet metal web wall, the first web wall extending from one angular support wall and the second web wall extending from another angular support wall	See Mishra Declaration, page A5, front view, elements 210 & 240. See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2.	See spec page 6, lines 15-16, web 200, comprises body 210 and chord lips 240 (i.e. 210 & 240 are web walls); See also Figure 1 & 2.
the two beam components being disposed with respect to each other such that the web walls of one of the beam components overlap the web walls of the other of the beam components	the two beam components being disposed with respect to each other such that a substantially flat main web wall is disposed between the beam components	See Mishra Declaration, page A5, front view, elements 210 & 240. See also, Meyer Dec., page 4 #23, exhibit 16 drawings, pages 1-2. **The applicant agrees that there is no**	See spec page 6, lines 15-16, web 200, comprises body 210 and chord lips 240 (i.e. 210 & 240 are web walls); See also Figure 1 & 2. **The applicant agrees that there is no support in the specification**

Claim element from Buecker, US Pat No 6131362	Claim element from Current Application, 09/981507	Evidence establishing priority	Support in Specification
		support in the evidence for the web wall of one of the beam components to overlap the web walls of the other beam component. However, this is an obvious variation.	**for the web wall of one of the beam components to overlap the web walls of the other beam component. However, this is an obvious variation.**
fastening devices connecting the web walls, thereby providing a beam structure having opposed end walls with intermediate and interconnected web walls	fastening devices connecting the first and second web walls, thereby providing a beam structure having opposed end walls with intermediate and interconnected web walls	See Mishra Declaration, page A5, side view, elements 230 (fastening devices connecting web wall sections). See also, Meyer Dec., page 4 #23, exhibit 16 drawings page 1-2; and Meyer Dec., page 5, #24, exhibit 17, page 1.	Fastening devices are fasteners 230, in Figure 1; see also spec. page 6, lines 15-18; and spec. page 8, lines 5-7. See also spec. page 12, lines 9-10.